

			Production Services- Typical Projects				
			Time Estimates in Person-Days			Medium Project	
			5/19/95				
				Interface			
			Analyst	Designer	Engnr	Manager	Total
PROJECT DEFINITION							
1. Document customer requirements			2			1	3
a. Project overview							
b. Preliminary story board							
c. Module descriptions							
d. Customization descriptions							
2. Prepare task estimate			0.5			0.5	1
a. Responsibilities - WAIS vs. customer							
b. Standard modules and scope							
c. Customization/new modules							
3. Prepare schedule			0.5				0.5
4. Finalize sales proposal						0.5	0.5
			Definition Days	3		2	5
MOCKUP/DESIGN							
1. Organize project team & revise schedule						1	1
2. Prepare system spec			3			1	4
3. Design storyboard and pages			2	3			5
4. Prepare mockup and obtain approval				12	3		15
5. Obtain all data files and design parsing & database access					3	1	4
6. Design custom modules and modifications			1		3	1	5
7. Review mockup and document changes			1	2	1	1	5
8. Revise task estimate and schedule for Installation			0.5				0.5
9. Update system spec			0.5				0.5
10. Obtain customer sign-off and freeze design			1			1	2
			Design days	9	17	10	42
DEVELOPMENT							
1. Implement additional screens			1	2			3
2. Develop file handling and database parsing			1		15		16
3. Develop custom modules & modifications					15		15
4. Revise screens, interfaces and flow based on mockup changes			1	1			2
5. Conduct system test			2	1	5	2	10
6. Review final system and correct as necessary				1	1	1	3
7. Cutover to production status							
8. Monitor performance and final cleanup							
9. Finalize documentation			3		2	1	6
10. Transition to support organization					1		1
			Install days	8	5	39	56
			TotalPerson days	20	22	49	103
			Total Person hours	160	176	392	824

		Production Services- Typical Projects					
		Time Estimates in Person-Days Small Project					
		5/19/95					
			Analyst	Interface Designer	Engnr	Manager	Total
PROJECT DEFINITION							
1. Document customer requirements							
a. Project overview							
b. Preliminary story board							
c. Module descriptions							
d. Customization descriptions							
2. Prepare task estimate							
a. Responsibilities - WAIS vs. customer							
b. Standard modules and scope							
c. Customization/new modules							
3. Prepare schedule							
4. Finalize sales proposal			0.5			0.5	1
		Definition Days	0.5			0.5	1
MOCKUP/DESIGN							
1. Organize project team & revise schedule							
2. Prepare system spec							
3. Design storyboard and pages			1				1
4. Prepare mockup and obtain approval			1			1	2
5. Obtain all data files and design parsing & database access							
6. Design custom modules and modifications							
7. Review mockup and document changes							
8. Revise task estimate and schedule for Installation							
9. Update system spec			1				1
10. Obtain customer sign-off and freeze design							
		Design days	3			1	4
DEVELOPMENT							
1. Implement additional screens							
2. Develop file handling and database parsing							
3. Develop custom modules & modifications							
4. Revise screens, interfaces and flow based on mockup changes							
5. Conduct system test			1			1	2
6. Review final system and correct as necessary							
7. Cutover to production status							
8. Monitor performance and final cleanup			1				1
9. Finalize documentation							
10. Transition to support organization							
		Install days	2			1	3
		TotalPerson days	5.5			2.5	8
		Total Person hours	44			20	64

Production Services Staffing Model Page 1							
5/19/95							
Project Mix & Number of Projects		Medium	Small	Add-on			
Duration (months)		3	2	1			
Project Mix							
Simultaneous projects		20	66.7	6.7			
Projects per year		80	400	80			
Revenue/project		\$ 117,235	\$ 10,559	\$ 18,958			
Revenue per year		\$ 9,378,788	\$ 4,223,485	\$ 1,516,667	\$ 15,118,939		
Ave revenue/Hour		\$ 142	\$ 165	\$ 154			
		Pct of Time					
Production Manager		18%	6%	10%			
Analyst		30%	13%	30%			
Human Interface Designer		33%	0%	0%			
Engineer		74%	0%	30%			
		156%	18%	70%			
Person months/project	22						
Production Manager		0.5	0.1	0.1			
Analyst		0.9	0.3	0.3			
Human Interface Designer		1.0	0.0	0.0			
Engineer		2.2	0.0	0.3			
		0.0		0.0			
		4.7	0.4	0.7			
Person hours based on 8 hour day		824.0	64.0	123.2			
Staffing Needs		Medium	Small	Add-on	Total	Chargeable	Adjusted
Production Manager		3.6	3.8	0.7	8.1	90%	9.0
Analyst		6.1	8.3	2.0	16.4	90%	18.2
Human Interface Designer		6.7	0.0	0.0	6.7	90%	7.4
Engineer		14.8	0.0	2.0	16.8	90%	18.7
		31.2	12.1	4.7	48.0		53.3